Learning, Communication, and 21st Century Skills: Students Speak Up

Grades: 3-5
Subjects: Language Arts, Social Studies/History, Math, Government, Civics, Career or Job Training
Suggested Time: One Class Period (50 minutes)

Lesson Overview

Students will reflect on learning, communications, and preparation for future jobs, including the roles that technology and the Internet play in these areas. There are 7 suggested activities listed in this lesson plan. Start with the warm-up activity and select any of the activities that are appropriate for your students. The wrap up activity is a great way to get your students ready for participating in the Speak Up survey.

Activity List

1. Warm-up Exercise – How Do You Use Technology? (10 minutes)
2. Class Discussion – How Do You Like to Learn Science? (15 minutes)
3. Group Activity – Video games as part of the school day (10 minutes
4. Group Activity – Technology Challenges (15 minutes)
5. Wrap Up – Our Voices, Our Futures (15 minutes + homework)
6. Individual Activity – Complete Speak Up Surveys (15 -20 minutes)
7. Extension – Compare results of your school with the national data (optional)

Objectives

Students will:

- Reflect on their use of technology for learning and communication both in and outside of school
- Consider how their science and technology education is preparing them for future success
- Discuss their opinions and findings with peers
- Suggest ways that technology and the Internet use can be improved in their school
- Engage in civic responsibility by participating in school site decision-making

Teacher Preparation

- Confirm registration of your school at http://www.speakup4schools.org/speakup2010/
- Preview the Speak Up 2010 survey questions at http://www.tomorrow.org/speakup/downloads/SpeakUpSurveys_Students.pdf
- Reserve a computer lab or gain access to mobile laptops for classroom use, set up a station in the classroom where the students can complete the survey, or assign the completion of the survey as homework.

Vocabulary

The Speak Up surveys ask questions about the tools that students use for learning inside and outside of the classroom. In preparation for the survey, discuss any new terminology with students.

- Critical thinking
- Desktop computer
- Digital camera (Flip Camera, webcam)
- Digital Reader (such as: Kindle, Sony Digital)
- Document camera
- Firewalls
- Hand held game like Nintendo DS, GameBoy or Leapfrog
- Instant Messenger
- Interactive Whiteboard (SmartBoard, Polyvision)
- Laptops, Netbooks and Notebooks
- MP3 player or iPod
- Online
- Online class/courses
- Online textbooks
- Podcast
- PowerPoint
- School portal (Blackboard, Moodle)
- Search engine
- SmartPhone, (PDA's: Blackberry, iPhone, Droid)
- Simulations
- Skype
- Social Networking
- Tablet PC (such as iPad)
- Text messaging
- Video game player like xbox, Nintendo or Wii
- Virtual Worlds (like Webkinz, Club Penguin or Whyville)
- Web logs (Blog, Xanga)
- Website

Assessment

Teachers can evaluate the students on preparation and participation in group and class discussions. Students can print out a copy of their survey completion confirmation to submit as proof of completion of the survey.

Classroom Activities

The following activities are designed to engage the students in the survey experience and understand the importance of their participation. You may choose to do all or some of these exercises.

1. Warm-up Exercise – How Do You Use Technology? (10 minutes)

Technology means different things to different people. For this activity and the survey, we are using the term "technology" to mean different types of electronic devices, not just computers and the Internet. Start by reviewing the sample survey questions below with the class.

How do you use technology for schoolwork? (Check all that apply)

- Check on my grades
- Complete assignments
- Create a Powerpoint or video
- Do online experiments for science
- Email, IM or text message my teacher
- Email, IM or text message other students
- Get help from an online tutor
- Listen to a podcast for class
- Play educational games
- Post to blogs or wikis (like a journal)
- Practice my writing
- Practice math problems
- Take a class online
- Take tests online
- Upload assignments to school portal
- Use online textbooks
- Use the Internet for research
- Watch videos for science
- Work on projects with students in other countries
- None of the above

How do you use Internet tools outside of school?

- Download or listen to music
- Play in 3D virtual worlds like Webkinz, Club Penguin or Whyville
- Play video or online games
- Send E-mails or Instant Messages
- Update my profile on websites like Webkinz, Club Penguin, or Whyville
- Talk to others through the Internet
- Do Internet research on things that interest me
- Watch videos
- Write for a blog (like a journal, etc.)
- Do art projects
- Go to websites for TV shows or sports
- Share photos
- Create a list of websites I want to share with others
- I don't use the Internet outside of school
- None of the above

Ask students to write in their journal a quick response to one or both of these questions:

- What kinds of technology do you use?
- How important is technology to the way you learn at school and outside of school?

2. Class Discussion – How do you like to learn science? (15 minutes)

Review the questions below from the survey. As a class, discuss how students like to learn science. Do you like group activities? Using the computer? Learning about careers? How much (or how little) is technology involved in the way you like to learn? Are there other ways you can see technology helping you with these subject areas (such as animations, games)?

Which of these would be most helpful for you in learning science?

- Do experiments in a virtual lab
- Do a science project in my neighborhood
- Go on a virtual field trip to a zoo or aquarium
- My teacher likes science
- Play games that use science
- Read my science textbook
- See a video about the topic
- Take an online class from a teacher that likes science
- Talk to a scientists through a camera in the computer
- Use animations
- Use real science lab tools to do experiments
- None of the above

3. Group Activity: Technology Challenges (15 minutes)

Divide the students into small groups or pairs to brainstorm 1 to 2 challenges or obstacles in using technology, including computers and the Internet, for school work. Write the challenges on the board for the students to see. Help the students identify any key problems such as not enough computers, computers that don't work all the time, and so on. Review the question below and compare the responses to the list generated by the class.

What keeps you from using technology at your school? (Check all that apply)

- Computers are not always available or easy to get to
- I am unable to access the Internet
- I cannot access my personal email account
- I cannot email or IM to classmates
- I cannot use my own laptop
- I cannot use my own cell phone, smart phone or MP3 player
- I do not know how to use them
- Internet is not fast enough
- My teachers do not know how to use them
- My school blocks websites I need
- Software is not good enough
- None of the above
- Other (If Other is selected, please specify.)

Have the students return to their small groups and brainstorm solutions to one of the key problems identified by the class. Have them share their proposed solutions with the class.

Next, review the question below and have the students design their own schools. *What is first thing they would change at the school about technology? How does their choice help students learn?*

Imagine you are in charge of building a new school. What would you include in that new school for kids to use? (Check all that apply)

- Projectors for computers
- Document camera (such as: ELMO)
- Online, computer or video games
- Handheld devices for students to answer questions (clickers)

- High tech tools for science
- Interactive whiteboards (such as Smartboard, Polyvision)
- Mobile computer for every student (such as: laptop, mini-notebook)
- Mobile devices (e.g. cell phones, MP3 players, iPods)
- Online Classes
- Online textbooks
- School website or portal
- Tablet PC (such as: iPad)
- Tools to communicate with others (Email, IM or text messaging)
- Tools to help me organize my schoolwork
- Tools to create podcasts or videos
- Tools to work with others (like blogs, wikis, Google Docs, etc)
- Ability to use the Internet anywhere at school
- Do webinars or video conferences with people outside of the school
- Other (If Other is selected, please specify.)

4. Group Activity: Video games as part of the school day (10 minutes)

Ask the students to brainstorm a list of how video games could be helpful in the classroom. Encourage them to be creative. Then, have them respond to the sample question below. Ask the students to think of specific subjects that would benefit from the use of video games. Have the students share their ideas about how video games might be helpful in the classroom with each other.

How could playing games like these at school help you with learning? (Check all that apply)

- I would learn more about the subject
- I would be more engaged in the subject
- I would learn how to work in teams
- Games make it easier to understand difficult concepts
- I can see the direct results of my problem solving efforts
- It would be more interesting to practice problems
- I would be directing my own learning
- I would go beyond the basic assignment and try new things through the game
- I would get immediate feedback on how much I had learned
- I would be better able to connect the real world to the subject matter
- None of the above

The Speak Up survey concludes with an open-ended question that focuses on big-picture thinking. You may assign it to the students as a homework assignment.

Imagine you have the job of designing a new cell phone game to help students learn. What would your game do? How would it help you learn? Be creative!

5. Wrap Up – Our Voices, Our Futures

As a closing to any of the activities you've completed above, have the students share any closing ideas about how they would like to use the role technology plays in their lives

6. Individual Activity: Complete Speak Up Surveys (15 – 20 minutes)

Have the students complete the Speak Up survey about how they use technology and the Internet at the survey site: http://www.speakup4schools.org/speakup2010/. Enter the school name and state, and your school's secret word to access the survey.

7. Extension: Compare the results of your school with the national data

School contacts will be notified when the Speak Up data is available in February 2011. Your school's data will be accessible using a special admin password provided to your Speak Up contact. Teachers can access to the aggregated results for their own school as well as their district and see how their experience with technology and the Internet relates to other youth. Project Tomorrow will compile the results and share with local, state, and national decision-makers.

The comparative national data provides rich opportunities for data and statistics activities that support your math objectives.

Curriculum Standards

McREL Standards

From Content Knowledge, 3rd Edition, a compilation of content standards for K-12 curriculum, created by Mid-continent Research for Education and Learning (McREL).

Civics – 3-5 (Level II)

Standard 8.5 - Understands the focus on the school, community, state, and nation in American society (e.g., people should try to improve the quality of life in their schools, communities, states, and nation; people should help others who are less fortunate than they and assist them in times of need, emergency, or natural disaster)
http://www.mcrel.org/compendium/reference.asp?item=benchmark&BenchmarkID=2479&subjectID=14

Listening and Speaking 3-5 (Level II)

Standard 8: Uses listening and speaking strategies for different purposes
http://www.mcrel.org/compendium/standardDetails.asp?subjectID=7&standardID=8

Writing 3-5 (Level II)

Standard 1: Uses the general skills and strategies of the writing process
http://www.mcrel.org/compendium/standardDetails.asp?subjectID=7&standardID=1

Technology 3-5 (Level II)

Standard 3: Understands the relationships among science, technology, society, and the individual
http://www.mcrel.org/compendium/standardDetails.asp?subjectID=19&standardID=3

ISTE National Education Technology Standards

http://www.iste.org/standards/nets-for-students/nets-student-standards-2007.aspx

1. **Creativity and Innovation**
   Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.

2. **Digital Citizenship**
   Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.